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REMARKS/ARGUMENTS

Upon entry of the instant amendment, claims 19-30 are pending. Claims 19 and 23 have been amended to more particularly point out the applicant's invention. It is respectfully submitted that upon entry of the instant amendment and consideration of the remarks, the application is in condition for allowance.

CLAIM REJECTIONS – 35 U.S.C. § 102

Claims 19, 23, and 24 have been rejected under 35 U.S.C. § 102(a) as being anticipated by Zagoskin, et al., U.S. Patent Application Publication No. US2003/0071258 A1. In order for there to be anticipation, each and every one of the elements of the claims at issue must be found in a single reference. It is respectfully submitted that the claims disclose elements clearly not disclosed or suggested in the Zagoskin, et al. published patent application. For example, the claims at issue now recite a vertical resistance structure which includes a first layer of aluminum with an aluminum oxide layer formed thereupon. A second layer of aluminum is formed on top of the aluminum oxide layer thereby forming a vertical resistance structure.

Paragraph [0084] of the Zagoskin, et al. reference discloses the use of aluminum and aluminum oxide, but in a horizontal configuration, which is described in the reference as forming an insulator – the opposite of a resistance which is a conductor. The Examiner's attention is directed to Fig. 2 of the Zagoskin, et al. reference. In particular, the aluminum referred to in paragraph [0084] of the Zagoskin, et al. reference is identified in Fig. 2 with the reference numbers 60-1 and 60-2. The aluminum oxide is identified with the reference numeral 50. As shown in Fig. 2 of the Zagoskin, et al. reference the layers of aluminum and aluminum oxide are configured in a side-by-side relationship. As clearly set forth in the Zagoskin, et al. reference, such a configuration is used to form an insulator. The Examiner's attention is also directed to claim 1.

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The claims, on the other hand, relate to a vertical structure which forms a resistance (i.e., conductor), just the opposite of the insulator taught by the Zagoskin, et al. patent. For these reasons and all of the above reasons, the Examiner is respectfully requested to reconsider and withdraw the rejections of claims 19, 23, and 24.

CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 20-22 and 25-27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Zagoskin, et al. reference in view of the applicant's admitted prior art with respect to *IBM Technical Disclosure Bulletin*, Vol. 18, No. 8, Jan. 1976. The Zagoskin, et al. reference has already been discussed. The IBM reference was cited for teaching that it is known in the art to form devices by doping aluminum layers with paramagnetic impurities such as oxygen or nitrogen. The IBM reference does not, otherwise, disclose a vertical structure as recited in the claims at issue. For these reasons and all the above reasons, the Examiner is respectfully requested to reconsider and withdraw the rejections of claims 20-22 and 25-27.


Claims 28-30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Zagoskin, et al. in view of Kwon, U.S. Patent Application Publication No. US2004/0011286. The applicant respectfully disagrees with the conclusion that paragraph [0065] of the Kwon reference teaches a sandwich structure of aluminum/aluminum oxide. A fair reading of [0065] simply states that various materials including aluminum Al and aluminum oxide Al_2O_3 can be deposited as a single atomic deposition layer and cleaned by the process disclosed in the patent. The Kwon patent application publication does not disclose a sandwich structure as recited in the claims at issue.

For these reasons and all of the above reasons, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 28-30.

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Respectfully submitted,

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